



18.7 Secure Series Tags



Active Fixed RFID Interrogator CLIN:0001AA

Installation & Operation Manual



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ATTENTION

- This Hi-G-Tek product is designed for commercial/industrial use only, and should only be handled by personnel authorized by Hi-G-Tek representatives.
- Installation must be performed according to this Guide.
- Using only certified antennas: It is the responsibility of the installer to ensure that when using the outdoor antenna kits in the United States (or where FCC rules apply), only those antennas certified with the product are used.
- The use of any antenna other than those certified with the product is expressly forbidden in accordance with FCC rules CFR47 part 15.204 and part 15.203.

The FCC Wants You to Know

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- a) Reorient or relocate the receiving antenna.
- b) Increase the separation between the equipment and receiver.
- c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- d) Consult the dealer or an experienced radio/TV technician.



FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

Instructions concerning human exposure to radio frequency electromagnetic fields:

A distance of at least 20cm. between the equipment and all persons should be maintained during the operation of the equipment.

FCC ID: OB6-IGRF97433

Active Fixed RFID Interrogator: IG-RF-97D1-433, CLIN# 0001AA

Spare Parts

Hi-G-Tek recommends that only original products, spare and replacement parts authorized by Hi-G-Tek Inc. be used for installation, service and repair.

Hi-G-Tek Inc. does not accept any responsibility and will not be liable for any consequences due to improper materials used.

Hi-G-Tek , Inc.
1445 Research Blvd.
Suite 150
Rockville, MD 20850
USA
info@higtek.com
Office: +1-301-279-0022
Fax: +1-301-279-0055



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1 Introduction

The 18.7 Series Active Fixed RFID Interrogator is designed to monitor 18.7 Secure Series Transponders.



Figure 1: Fixed RFID Interrogator

The unit is connected to a host control computer, either directly or via Ethernet, and monitors all transponders in its vicinity

The interrogator performs periodic monitoring requests of all transponders, by broadcasting a “wake up” request sent to all the transponders and each one of them responds with its a present status.

2 Installation

2.1 Mounting the Fixed RFID Interrogator

The fixed interrogator can be either wall mounted or pole mounted.

Select the proper RF coverage location (interrogation range up to 300 ft.) and proceed as follows:

Wall mounting installation

- The interrogator has to be installed vertically at a height of about 6ft. above ground.
- Use supplied wall attachment accessories to attach unit to the wall.
- Once properly aligned, mark 4 drill holes through the mounting bracket.
- Mount the device using 4 sheet metal screws No.12 x 1.5" inserted into corresponding standard plastic anchors.

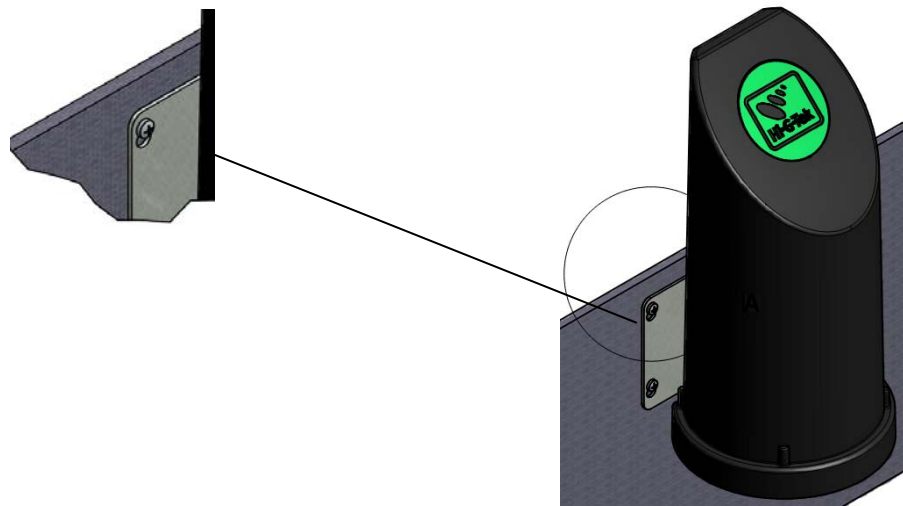


Figure 2: Wall mounting the interrogator

2.1.1 Pole mounting installation

- Use supplied pole mount kit (IG-RF-ACC-01) to mount device on a pole.
- Attach the pole mount bracket to the Interrogator's rear support plate using the provided bolts and screws nuts (included in the mounting kit , see page 8, kit content)
- Attach the device to the pole vertically using the provided zip ties, keep a minimum height of 6ft. above the ground.
- Route the Interrogator's cables downward as shown below

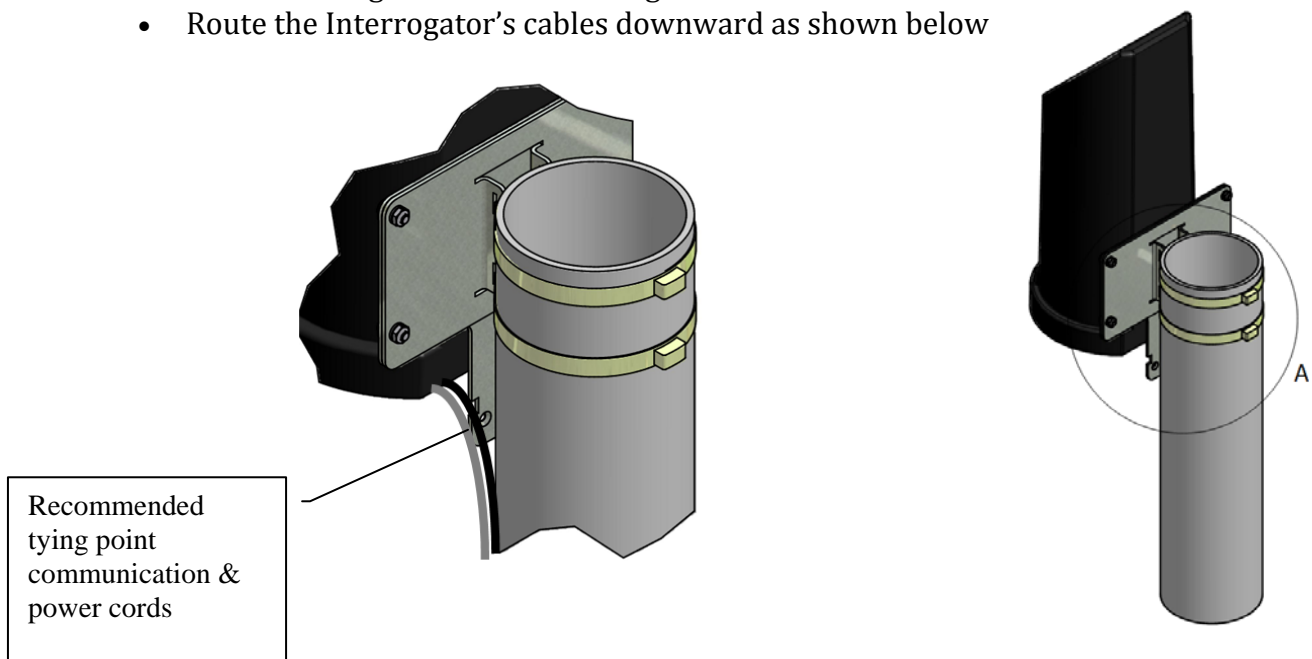


Figure 3: Pole mounting

2.1.2 Connecting hookup cables

Connection of cables to the Interrogator is achieved from the bottom of the unit – see Figure 4.

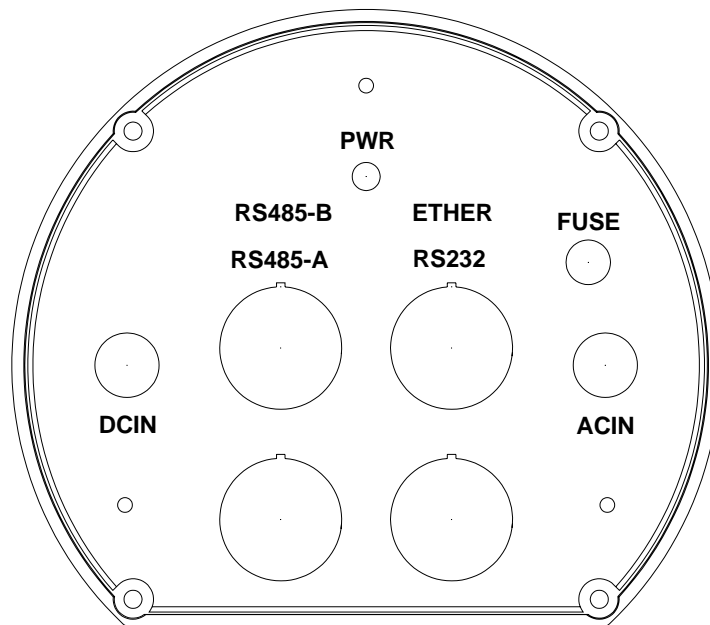


Figure 4: Bottom view of Interrogator

The bottom of the unit contains the following connectors and accessories:

- Power ON indicator LED.
- Power fuse.
- DC In connector: 12 to 30 Volt dc.
- AC In connector: 100 – 250 VAC 50 -60 Hz.
- RS232 connector: RJ45 connector for local configuration and diagnostics.
- RS485 connector: RJ45 connector for local configuration and diagnostics.
- LAN connector: RJ45 Ethernet access connector – for connecting to control PC.
- RS485 connector: RS-485 for cascading option (daisy chain network).

2.2 Installation accessories and connecting cables

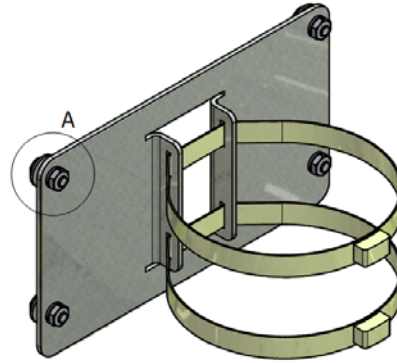
Item / HGT's Model

Description

CLIN 0001 Active Fixed RFID Interrogator

0001AB – Mounting Kit
Hi-G-Tek, Model # = IG-RF-ACC-01

- Compliant mounting kit In Accordance With (IAW) DoD requirements.
- Flexible surface mounting for short-term and long-term installations.



Kit Content

P/N	Part Description	Qty
IGRFACC01	MOUNTING KIT FOR FIXED INTERROGATOR	1
HGT6509	SMOOTH METAL HOSE BANDING 15/32"X0.031"	2
HGT6508	WASHER SPRING 1/4" STEEL, ZINC PLATED.	4
HGT6506	NUT 1/4" STEEL, ZINC PLATED	4
HGT6505	SCREW HEX HEAD 1/4"NFx5/8" STEEL, ZINC PLATED	4
HGT6507	WASHER FLAT 1/4"X16X1 STEEL, ZINC PLATED	4
HGT6454	READER RFID3 POLE MOUNTING PLATE	1
HGT6510	HOUSING WITH SCREW FOR BANDING	2

0002AD AC/DC Power Cable
Hi-G-Tek, Model # = IG-RF-ACC-09

AC power cord for Fixed RFID Interrogator, standard USA Plug , 20AWG, UL recognized



Installation & Operation: Active Fixed RFID Interrogator



Item / HGT's Model #	Description
<p>DC/DC Power Cable Hi-G-Tek, Model# = IG-RF-ACC-04</p>	<p>DC power cord for Fixed RFID Interrogator Provided along with "Alligator " clips</p>  
•	
<p>RS485 communication cable, plug type-RJ45 , IP68 rated Hi-G-Tek, Model # = IG-RF-ACC-10</p>	



3 Technical Specifications

Communications	
<ul style="list-style-type: none"> Operating frequency Omni Directional read/write range 	433.92 MHZ Up to 300 feet (100 meters) open space
Memory	
Memory size	128 Kbytes of available database table memory
Data retention	Data is stored for a minimum of five years
Power Requirements	
AC Mains	100 – 250 VAC, 50-60 Hz, 6watt
DC Mains	12 – 30 VDC
Input Power	6 Watt
Control Interfaces	
RS-232	For local configuration and diagnostics.
Ethernet interface	For host access and management. IPv4 or IPv6 or mixed network is supported
RS-485	for cascading option
Environmental	
Operating temperature	-25°C to +55°C
Storage temperature	-40 °C to +70°C
Hardened weatherproof	Complies with the IEC 60529 IP 64 rating
Physical Dimensions	
Size	210x300x520mm
Weight	5400 gr
Antenna	Internal
Attachment methods	Mounting kits for walls, post and industrial tripod



Standards
• FCC part 15 sub part B class B, sub part C section 15.231
• Compliant with ISO 18000-7:2008 standards and the DoD interoperability guidelines
• Hazardous environment: Certified as Non-Incendive (NI) for operation in environment where flammable and explosive gases and vapors may be present
• Compliant with HERO environment testing at 1-inch separation
• Complies with applicable DoD, national and international spectrum management policies and regulations to include spectrum certifications in accordance with DoD Directive 4650.1 "Management and use of the Radio Frequency Spectrum" and DoD Directive 5000.1